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4,750,213 Jun. 7, 1988 L1: 1 of 2
Method and system for editing unwanted program material from broadcast signals

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INT-CL: [4] H04B 17*00
US-CL-ISSUED: 455*67; 358*908, 139
US-CL-CURRENT: 455*67; 358*139, 908
SEARCH-FLD: 455*2, 67, 68, 69, 70; 358*84, 139, 908
REF-CITED:

U.S. PATENT DOCUMENTS

3,919,479	11/1975	Moon et al.	455*67
4,230,990	10/1980	Lert, Jr. et al.	455*67
4,305,101	12/1981	Yarbrough et al.	358*908
4,390,904	6/1983	Johnston et al.	358*908
4,420,769	12/1983	Novak	455*2
4,450,531	5/1984	Kenyon et al.	358*84
4,520,404	5/1985	Von Kohorn	358*908

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ABSTRACT:

An improved method and system for the editing of unwanted content from transmitted program material. The system may be operated manually or automatically and its program recognition means may be positioned either locally at the controlled receiver or in a remote location. The system also has expanded editing capability to allow coordinated control of accessory devices and may be programmed without the necessity of an initial reception of unwanted content at the controlled receiver. It also simplifies and improves the reliability of previously disclosed methods for automatic program identification.

8 Claims, 5 Drawing Figures

4,739,398 [IMAGE AVAILABLE] Apr. 19, 1988 L1: 2 of 2
Method, apparatus and system for recognizing broadcast segments

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BCH

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SEARCH-FLD: 358*84, 139, 908; 455*2, 67; 382*16, 32, 33
REF-CITED:

U.S. PATENT DOCUMENTS

2,330,241	9/1943	Roberts	250*20
2,630,525	3/1953	Tomberlin et al.	250*6
3,004,104	10/1961	Hembrooke	179*2
3,070,798	12/1962	Currey et al.	346*37
3,143,705	8/1964	Currey et al.	325*31
3,148,245	9/1964	Currey et al.	179*2
3,396,240	8/1968	Abbey et al.	178*69
3,415,947	12/1968	Abbey et al.	178*69
3,466,394	9/1969	French	179*1
3,700,815	10/1972	Doddington et al.	179*1SA
3,760,275	9/1973	Ohsawa et al.	325*31
3,845,391	10/1974	Crosby	325*64
3,885,217	5/1975	Cintron	325*26
3,919,479	11/1975	Moon et al.	179*1SB
4,025,851	5/1977	Haselwood et al.	325*31
4,200,861	4/1980	Hubach et al.	340*146.3Q
4,225,967	9/1980	Miwa et al.	455*68
4,227,177	10/1980	Moshier	340*146.3R
4,230,990	10/1980	Lert, Jr. et al.	455*67
4,244,029	1/1981	Hogan et al.	364*728
4,281,217	7/1981	Dolby	179*1GN
4,283,735	8/1981	Jagger	358*4
4,305,101	12/1981	Yarbrough et al.	360*69
4,390,904	6/1983	Johnston et al.	358*335
4,420,769	12/1983	Novak	358*139
4,450,531	5/1984	Kenyon et al.	364*604
4,466,122	8/1984	Auerbach	382*17
4,499,601	2/1985	Matthews	455*166
4,511,917	4/1985	Kohler et al.	358*84
4,520,404	5/1985	Von Kohorn	358*335
4,547,804	10/1985	Greenberg	358*142
4,574,304	3/1986	Watanabe et al.	358*84
4,677,466	6/1987	Lert, Jr. et al.	358*84

FOREIGN PATENT DOCUMENTS

161512 11/1985 European Patent Office 358*84

OTHER PUBLICATIONS

"Television Video Recognition System Documentation".

"TV Sources on the Sage 68000".

Various Computer Program Listings and Other Documents, (pertaining to items 1 and 2, above).

"Television Signal Processor", report by David Schmidling, dated Feb. 20, 1985.

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LEGAL-REP: Laurence S. Rogers, Jeffrey H. Ingberman

ABSTRACT:

A method, apparatus and system are provided for recognizing broadcast segments, such as commercials, in real time by continuous pattern recognition without resorting to cues or codes in the broadcast signal. Each broadcast frame is parametrized to yield a digital word and a signature is constructed for segments to be recognized by selecting, in accordance with a set of predefined rules, a number of words from among random locations throughout the segment and storing them along with offset information indicating their relative locations. As a broadcast signal is monitored, it is parametrized in the same way and the library of signatures is compared against each digital word and words offset therefrom by the stored offset amounts. A data reduction technique minimizes the number of comparisons required while still maintaining a large database.

47 Claims, 18 Drawing Figures

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COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.40	2.40

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